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Proposed Maximum Residue Limit PMRL2014-49

Clothianidin

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on Fruiting Vegetables (Crop Group 8-09) and Cucurbit Vegetables (Crop Group 9) to the product labels of Clothianidin Insecticide and Clutch 50 WDG Insecticide, containing technical grade clothianidin, is acceptable. The specific uses approved in Canada are detailed on the labels of Clothianidin Insecticide, *Pest Control Products Act* Registration Number 29384 and Clutch 50 WDG Insecticide, *Pest Control Products Act* Registration Number 29382.

The evaluation of these clothianidin applications indicated that the end-use products have merit and value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for clothianidin is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Standards Council of Canada.

The proposed MRLs, to be added to the MRLs already established for clothianidin, are as follows.

Table 1 Proposed Maximum Residue Limits for Clothianidin

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
Clothianidin	[C(*E*)]-*N*-[(2-chloro-5-thiazolyl)methyl]-*N'*-methyl-*N''*-nitroguanidine	0.2	Fruiting vegetables (Crop Group 8-09)
		0.06	Cucurbit vegetables (Crop Group 9)

[1] ppm = parts per million

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the field crop trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for clothianidin in Canada with corresponding American tolerances and Codex MRLs[1]. American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Fruiting vegetables (Crop Group 8-09)	0.2	0.20 (vegetable, fruiting, group 8, except pepper) 0.8 (pepper)	0.05 (Fruiting vegetables other than cucurbits)
Cucurbit vegetables (Crop Group 9)	0.06	0.06	0.02 (Fruiting vegetables, cucurbits)

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for clothianidin up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

Appendix I

Summary of Field Trial Data Used to Support the Proposed MRLs

Residue data from field trials conducted in the United States were submitted to support the domestic use of Clutch 50 WDG Insecticide and Clothianidin Insecticide on fruiting vegetables (Crop Group 8-09) and cucurbit vegetables (Crop Group 9). Clothianidin was applied to cantaloupes, cucumbers, summer squash, tomatoes, and peppers, and crops were harvested according to the proposed label directions. In addition, a processing study in treated tomatoes was reviewed to determine the potential for concentration of residues of clothianidin in processed commodities.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for clothianidin was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for fruiting vegetables (Crop Group 8-09) and cucurbit vegetables (Crop Group 9).

Table A1 Summary of Field Trial and Processing Data Used to Support Maximum Residue Limits (MRLs)

Commodity	Application Method/ Total Application Rate (g a.i./ha)	Pre Harvest Interval (days)	Residues (ppm)		Experimental Processing Factor
			Min	Max	
Cantaloupes	Foliar application/ 225-228	7	<0.01	0.037	Not applicable
Cucumbers	Foliar application/ 223-227	7	<0.01	0.017	Not applicable
Summer squash	Foliar application/ 219-234	7	<0.01	0.043	Not applicable
Tomato	Foliar application/ 219-231	7	<0.01	0.042	0.8X (tomato puree) 1.2X (tomato paste)
Bell peppers	Foliar application/ 222-227	6-7	<0.01	0.092	Not applicable
Non-bell peppers	Foliar application/ 221-225	7	0.018	0.076	Not applicable

Following the review of all available data, MRLs of 0.2 ppm in/on fruiting vegetables (Crop Group 8-09) and 0.06 ppm in/on cucurbit vegetables (Crop Group 9) are recommended to cover residues of clothianidin. Residues of clothianidin in these crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.